

supplying a first fluidizing gas as an upward flow into said first area, supplying a second fluidizing gas as an upward flow into said second area, and supplying heat recovery region fluidizing gas to said heat recovery region;

controlling a mass flow of said first fluidizing gas to be smaller than a mass flow of said second fluidizing gas to create in said first area a moving bed where said fluidized medium descends and is dispersed and to create in said second area a fluidized bed where said fluidized medium is fluidized, whereby said combustibles are gasified into a combustible gas in said combustion region while circulating therein with said fluidized medium; and

flowing said fluidized medium from said combustion region over said partition wall into said heat recovery region, and returning said fluidized medium in said heat recovery region to said combustion region; and

said controlling comprises adjusting said supplying said heat recovery region fluidizing gas to said heat recovery region.

16. (Amended) A method as claimed in claim 20, wherein said fluidized-bed furnace has a substantially circular cross-sectional shape and has therein a fluidized medium, said combustion region comprises a circular central region, said heat recovery region comprises an outer peripheral region, said combustion region and said heat recovery region are separated by a partition wall and are connected above and below said partition wall, said combustion region includes central and peripheral areas adjacent to each other, and further comprising:

supplying a central fluidizing gas as an upward flow into said central area, supplying a peripheral fluidizing gas as an upward flow into said peripheral area, and supplying heat recovery region fluidizing gas to said heat recovery region;

controlling a mass flow of one of said central fluidizing gas and said peripheral fluidizing gas to be smaller than a mass flow of the other of said peripheral fluidizing gas and said central fluidizing gas, to create in one of said central area and said peripheral area a moving bed where said fluidized medium descends and is dispersed and to create in the other of said peripheral area and said central area a fluidized bed where said fluidized medium is fluidized, whereby said combustibles are gasified

into a combustible gas in said combustion region while circulating therein with said fluidized medium;
and

flowing said fluidized medium from said combustion region over said partition wall into said heat recovery region, and returning said fluidized medium in said heat recovery region to said combustion region; and

said controlling comprises adjusting said supplying said heat recovery region fluidizing gas to said heat recovery region.

20. (Amended) A method of treating combustibles, said method comprising:
gasifying combustibles in a combustion region of a fluidized-bed furnace, thus generating combustible gas and non-combusted particles;
recovering heat from said gasifying in a heat recovery region of said fluidized-bed furnace;
controlling a rate of said recovering in said heat recovery region; and
delivering said combustible gas and non-combusted particles to a melt combustion furnace and therein combusting said combustible gas and melting non-combustible ash of said non-combusted particles.

Kindly cancel claim 21 presently in the application without prejudice.

Kindly amend claims 22-24 as follows:

22. (Amended) An apparatus as claimed in claim 24, wherein said fluidized-bed furnace has therein a fluidized medium, said combustion region and said heat recovery region are separated by a partition wall, said combustion region includes first and second areas adjacent to each other, and further comprising:

an air diffusion device to supply a first fluidizing gas as an upward flow into said first area, to supply a second fluidizing gas as an upward flow into said second area, and to supply heat recovery region fluidizing gas to said heat recovery region, said air diffusion device being structured such that

a mass flow of said first fluidizing gas is smaller than a mass flow of said second fluidizing gas to create in said first area a moving bed where said fluidized medium descends and is dispersed and to create in said second area a fluidized bed where said fluidized medium is fluidized, whereby said combustibles are gasified into a combustible gas in said combustion region while circulating therein with said fluidized medium; and wherein

said combustion region and said heat recovery region are connected above and below said partition wall, to allow said fluidized medium from said combustion region to flow over said partition wall into said heat recovery region;

said heat recovery surface comprises a member in said heat recovery region for a medium to pass therethrough; and

said air diffusion device includes a heat recovery region air diffuser at a bottom of said heat recovery region, said heat recovery air diffuser being structured to adjust the supply of said heat recovery region fluidizing gas to said heat recovery region to cause said fluidized medium in said heat recovery region to descend therein as a moving bed and to circulate therefrom below said partition wall back to said combustion region.

23. (Amended) An apparatus as claimed in claim 24, wherein said fluidized-bed furnace has a substantially circular cross-sectional shape and has therein a fluidized medium, said combustion region comprises a circular central region, said heat recovery region comprises a peripheral region, said combustion region and said heat recovery region are separated by a partition wall, said combustion region includes central and peripheral areas adjacent to each other, and further comprising:

an air diffusion device to supply a central fluidizing gas as an upward flow into said central area, to supply a peripheral fluidizing gas as an upward flow into said peripheral area, and to supply heat recovery region fluidizing gas to said heat recovery region, said air diffusion device being structured such that a mass flow of one of said central fluidizing gas and said peripheral fluidizing gas is smaller than a mass flow of the other of said peripheral fluidizing gas and said central fluidizing gas to create in one of said central area and said peripheral area a moving bed where said fluidized

medium descends and is dispersed and to create in the other of said peripheral area and said central area a fluidized bed where said fluidized medium is fluidized, whereby said combustibles are gasified into a combustible gas in said combustion region while circulating therein with said fluidized medium; and wherein

said combustion region and said heat recovery region are connected above and below said partition wall, to allow said fluidized medium from said combustion region to flow over said partition wall into said heat recovery region;

said heat recovery surface comprises a member in said heat recovery region for a medium to pass therethrough; and

said air diffusion device includes a heat recovery region air diffuser at a bottom of said heat recovery region, said heat recovery air diffuser being structured to adjust the supply of said heat recovery region fluidizing gas to said heat recovery region to cause said fluidized medium in said heat recovery region to descend therein as a moving bed and to circulate therefrom below said partition wall back to said combustion region.

24. (Amended) An apparatus for treating combustibles, said apparatus comprising:
a fluidized-bed furnace having a combustion region for gasifying combustibles, thus generating combustible gas and non-combusted particles, and a heat recovery region for recovering heat from said gasifying;

a heat recovery surface for controlling a rate of said recovering in said heat recovery region;
and

a melt combustion furnace for receiving the combustible gas and the non-combusted particles and for combusting the combustible gas and melting non-combustible ash of the non-combusted particles.